

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment and remarks filed September 16, 2009, are noted with appreciation.
2. Claims 1-5, 15, and 16, remain pending.

### ***Response to Arguments***

3. Claims 1, 2, 4, 5, and 16, do not positively recite that an ink solution is introduced into the passage and it is not required that the *conduit to feed an ink solution to the liquid droplet head* ever contain ink. The limitation must be given patentable weight to the extent that at least one of the solvents be a solvent contained in the ink. Since Katsuragi does not expressly teach that one of the solvents is a solvent contained in an ink that is actually added to the passage — or may later be added to the passage — the reference does not anticipate claims 1, 2, 4, 5, and 16, as amended. Further, since claims 3 and 15 actively recite adding an ink to the passage, Katsuragi does not anticipate these claims either. Nevertheless, it is clear that, at some point after cleaning, ink will be added to the passage in Katsuragi. Aqueous ink-jet printing inks are well-known in the art. It is the Examiner's position that it would have been obvious to one skilled in the art to utilize, as the ink, an aqueous ink.
4. Further, since the claims recite no structure for the suction unit, any means for generating a pressure differential between the supply solution and the ejected solution reads on the claimed suction unit. Since the water is ejected from (i.e., forced out) of the head of Katsuragi, there exists some suction (even if only on the molecular level), which

serves to draw the water through the head, thus reading on the claimed suction and suction unit. While the claims have been amended to recite that the various solutions with which the passage is filled are removed by the suction, the amendment does not require that the passage be completely exhausted (i.e., dry). As such, in the method of Katsuragi, each with each ejection of water from the ink-jet head, a given charge of water has been removed from the passage and replaced with another, thereby reading on the claims as amended.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-5, 15, and 16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuragi et al. (US 2002/0008725 A1) in view of Sugiyama et al. (US 4,388,115 A).**

A. Katsuragi is applied herein again as in prior Office actions.

B. Claims 1, 2, 4, 5, and 16

- i. As noted above, these claims do not require filling the passage with an ink, but the material filling the passage must be a solvent found in the ink. As cited previously, Katsuragi teaches water as the solvent.
- ii. Aqueous ink-jet inks are extremely well-known in the art; Sugiyama is cited as just one example.

iii. Since it is clear that an ink is added to the passage at some point after cleaning, it would have been obvious to one skilled in the art to utilize an aqueous ink. One skilled in the art would have been motivated to do so by the desire and expectation of successfully providing an ink-jet printing ink.

C. Claims 3 and 15

- i. These claims do require the presence of an ink in the passage.
- ii. Aqueous ink-jet inks are extremely well-known in the art; Sugiyama is cited as just one example.
- iii. Since it is clear that an ink is added to the passage at some point after cleaning, it would have been obvious to one skilled in the art to utilize an aqueous ink. One skilled in the art would have been motivated to do so by the desire and expectation of successfully providing an ink-jet printing ink.

D. The claims recite no structure for the suction unit, any means for generating a pressure differential between the supply solution and the ejected solution reads on the claimed suction unit. Since the water is ejected from (i.e., forced out) of the head of Katsuragi, there exists some suction (even if only on the molecular level), which serves to draw the water through the head, thus reading on the claimed suction and suction unit. While the claims have been amended to recite that the various solutions with which the passage is filled are removed by the suction, the

amendment does not require that the passage be completely exhausted (i.e., dry). As such, in the method of Katsuragi, each with each ejection of water from the ink-jet head, a given charge of water has been removed from the passage and replaced with another, thereby reading on the claims as amended.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Sunday, 5:00 AM - 12:00 PM and Monday through Friday, 5:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/  
Primary Examiner, Art Unit 1792

January 3, 2010